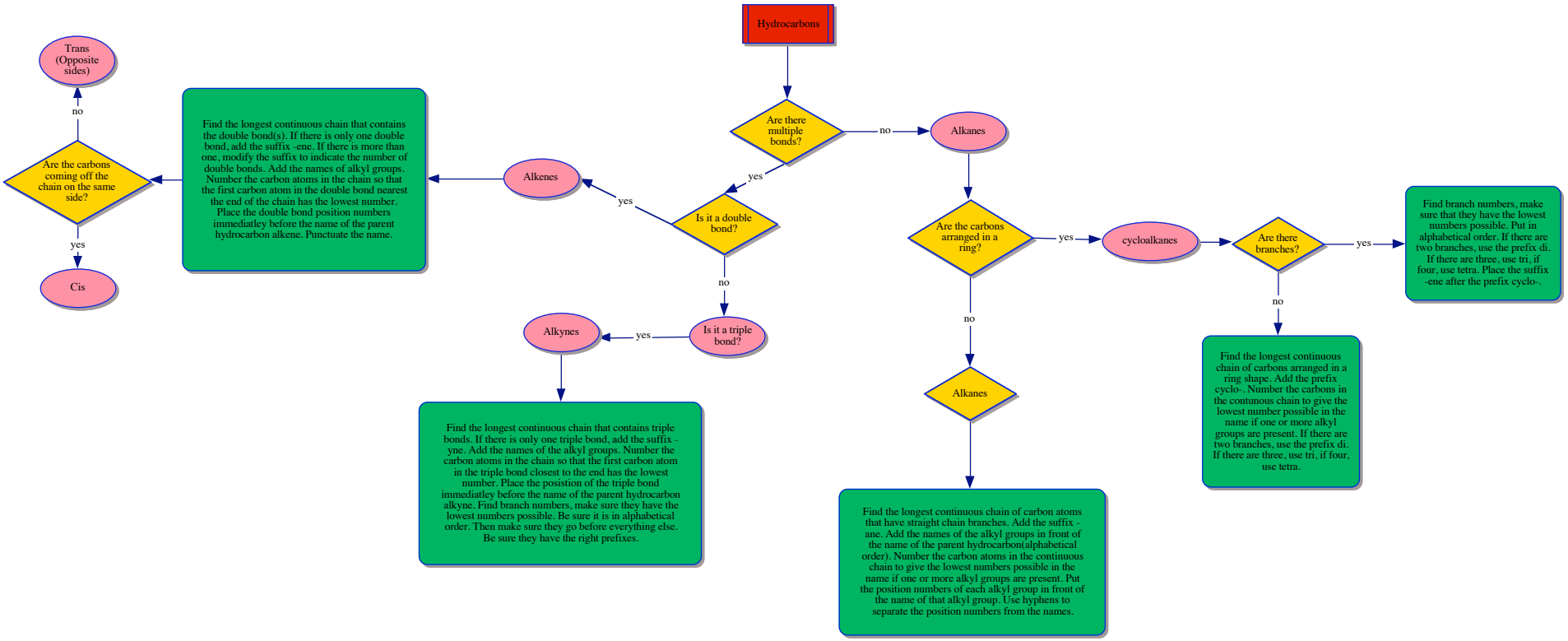
Hydrocarbons
Are there multiple bonds?
no
Alkanes
yes
Is it a double bond?
yes
Alkenes
Find the longest continuous chain that contains the double bond(s). If there is only one double bond, add the suffix -ene. If there is more than one, modify the suffix to indicate the number of double bonds. Add the names of alkyl groups. Number the carbon atoms in the chain so that the first carbon atom in the double bond nearest the end of the chain has the lowest number. Place the double bond position numbers immediatley before the name of the parent hydrocarbon alkene. Punctuate the name.
Are the carbons coming off the chain on the same side?
no
Trans (Opposite sides)
yes
Cis
no
Is it a triple bond?
yes
Alkynes
Find the longest continuous chain that contains triple bonds. If there is only one triple bond, add the suffix -yne. Add the names of the alkyl groups. Number the carbon atoms in the chain so that the first carbon atom in the triple bond closest to the end has the lowest number. Place the posistion of the triple bond immediatley before the name of the parent hydrocarbon alkyne. Find branch numbers, make sure they have the lowest numbers possible. Be sure it is in alphabetical order. Then make sure they go before everything else. Be sure they have the right prefixes.
Are the carbons arranged in a ring?
yes
cycloalkanes
Are there branches?
yes
Find branch numbers, make sure that they have the lowest numbers possible. Put in alphabetical order. If there are two branches, use the prefix di. If there are three, use tri, if four, use tetra. Place the suffix -ene after the prefix cyclo-.
no
Find the longest continuous chain of carbons arranged in a ring shape. Add the prefix cyclo-. Number the carbons in the contunous chain to give the lowest number possible in the name if one or more alkyl groups are present. If there are two branches, use the prefix di. If there are three, use tri, if four, use tetra.
no
Alkanes
Find the longest continuous chain of carbon atoms that have straight chain branches. Add the suffix -ane. Add the names of the alkyl groups in front of the name of the parent hydrocarbon(alphabetical order). Number the carbon atoms in the continuous chain to give the lowest numbers possible in the name if one or more alkyl groups are present. Put the position numbers of each alkyl group in front of the name of that alkyl group. Use hyphens to separate the position numbers from the names.